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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,595

09/18/2003

Elliott Malcolm Philofsky

ACR-0301

8539

7590

12/16/2004

Law Office of Dale B. Halling, LLC  
Suite 311  
24 South Weber Street  
Colorado Springs, CO 80903

EXAMINER

THOMAS, ERIC W

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/666,595	PHILOFSKY, ELLIOTT MALCOLM	
	<b>Examiner</b>	<b>Art Unit</b>	
	Eric W Thomas	2831	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13,21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **INTRODUCTION**

The examiner acknowledges, as recommended in the MPEP, the applicant's submission of the amendment dated 10/22/04. At this point, claims 1, 4, 7, 10, 21 have been amended; and claims 14-20, 23 have been cancelled. Thus claims 1-13, 21-22 are pending in the instant application.

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/8/04 has been entered.

### ***Claim Objections***

1. Claims 1, 4, 6 are objected to because of the following informalities:

Claim 1, line 4, insert —electrode—after “nickel”.

Claim 4, line 2, replace “an” with —the--.

Claim 6 recites the limitation "the bump" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is

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required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-~~14~~, 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akram et al. (US 2004/0238957).

-Er 12/10/07

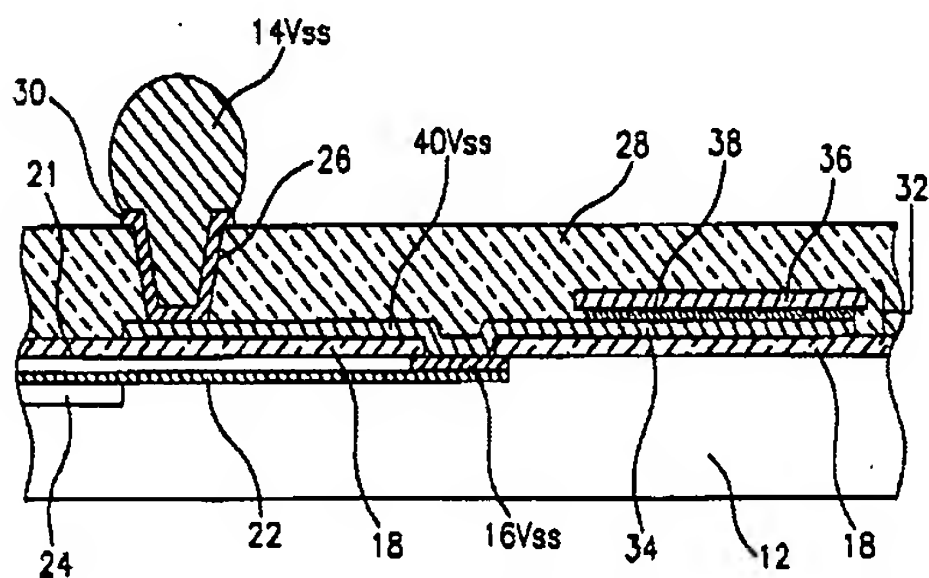


FIGURE 1D

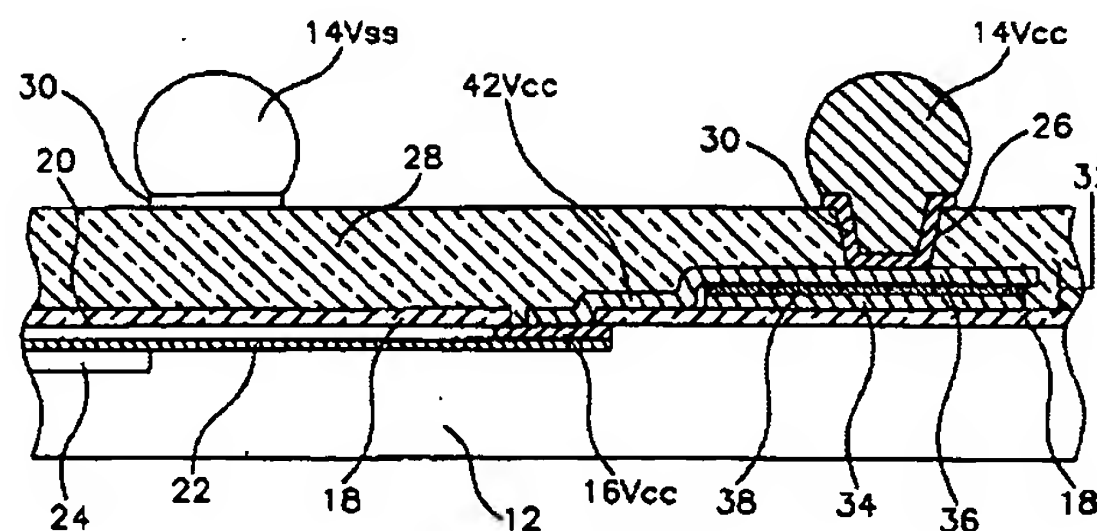


FIGURE 1E

Akram et al. disclose in fig. 1D, 1E, a first nickel electrode (34) electrically connected to an aluminum (paragraph 51) lead (16) of an integrated circuit (24) and applied on a passivation layer (18) of the integrated circuit, a dielectric (38) covering a side of the first nickel electrode; and a second nickel electrode (36) sandwiching the dielectric.

Akram et al. disclose the claimed invention except for the dielectric is formed from BCTZ.

Hagemann et al. teach that BCTZ is a known ceramic material used in the capacitor art (see col. 5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the dielectric layer of Akram et al. using the dielectric material of Hagemann et al., since such a modification would provide the capacitor with a material having a high dielectric constant.

Regarding claim 2, Hagemann et al. teach that the BCTZ contains 86 atoms of Ba for every 14 atoms of Ca (see col. 5 lines 15-65).

Regarding claim 3, Hagemann et al. teach that the BCTZ contains up to ~87 atoms of titanium for each ~12 atoms of zirconium (col. 2 lines 20-35).

Regarding claim 4, Akram et al. disclose the first nickel electrode is adjacent to the aluminum lead on the integrated circuit.

Regarding claim 5, Akram et al. disclose the second nickel electrode is electrically connected to a second aluminum lead (16) on the integrated circuit.

Regarding claim 6, Akram et al. disclose the second nickel electrode is a base for solder (14) bump. Regarding the limitation, "solder to be reflowed to form the bump" is a method of forming the device. The method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. In re STEPHENS, WENZL, AND BROWNE, 145 USPQ 656 (CCPA 1965).

Regarding claims 7 & 8, Akram et al. disclose a capacitor for an integrated circuit comprising a first nickel electrode (34) coupled to an aluminum electrical lead (16) of the integrated circuit, a dielectric (38) applied to the first nickel electrode; and a second nickel electrode (36) applied to the dielectric and electrically attached to a second electrical lead of the integrated circuit (16).

Akram et al. disclose the claimed invention except for the dielectric is formed from BCTZ.

Hagemann et al. teach that BCTZ is a known ceramic material used in the capacitor art (see col. 5).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the dielectric layer of Akram et al. using the dielectric material of Hagemann et al., since such a modification would provide the capacitor with a material having a high dielectric constant.

Regarding claim 9, Akram et al. disclose a portion of the second nickel electrode is deposited on a passivation layer of the integrated circuit.

Regarding claim 10, Akram et al. disclose an insulator (28) applied to an edge of the dielectric (see fig. 1E).

Regarding claim 11, Akram et al. disclose the insulator is applied to a portion of the first nickel electrode (see fig. 1E).

Regarding claim 12, Akram et al. disclose the claimed invention except for a layer of aluminum is applied over the second nickel electrode. Akram et al. disclose a terminal contact (30) applied over the second nickel electrode. Akram et al. disclose the

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terminal contact is formed from a metal material. Aluminum is a metal material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the terminal contact from an aluminum material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 13, Akram et al. disclose a wire lead is attached to the layer of aluminum (paragraph 63).

Regarding claim 21, Akram et al. disclose a capacitor for an integrated circuit comprising a first electrode (34) electrically connected to an aluminum lead (16) of the integrated circuit and applied on a passivation layer (18) of the integrated circuit, a dielectric (38) adjacent to the first electrode, and a second electrode adjacent to the dielectric, and a second electrode (36) adjacent to the dielectric.

Regarding claim 22, Akram et al disclose the first electrode is nickel.

### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-13, 21-22 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

In order to ensure full consideration of any amendments, affidavits, or declaration, or other documents as evidence of patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116 which will be strictly enforced.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric W Thomas whose telephone number is 571-272-1985. The examiner can normally be reached on M,Tu,Sat 9 am - 9:30 pm; W, Th, F 6 pm -10:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-1984. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, consisting of a large, stylized 'E' followed by a series of loops and a long horizontal stroke extending to the right. The date '12/12/04' is written in small text at the end of the signature.

Eric W Thomas



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Examiner  
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